

THE CLAIMS

What is claimed:

1. A bone plate comprising:
 - an upper surface;
 - 5 a lower surface; and
 - at least one combination hole extending through the upper surface and the lower surface, the at least one combination hole including:
 - a first portion having a substantially circular outer periphery defining a first center point, and a plurality of threads disposed on the outer periphery; and
 - 10 a second portion overlapping the first portion and having an elongated outer periphery defining a second center point;
 - wherein the first center point is spaced apart from the second center point along the upper surface.
- 15 2. The bone plate of claim 1, wherein the first center point is located between the second center point and the elongated outer periphery.
3. The bone plate of claim 1, wherein the elongated outer periphery is substantially elliptical.
- 20 4. The bone plate of claim 1, wherein the plurality of threads extend over an angle of greater than about 180° with respect to the first center point.
5. The bone plate of claim 1, wherein the plurality of threads taper radially inward in a direction from the upper surface toward the lower surface.
- 25 6. The bone plate of claim 1, wherein the second portion is configured and dimensioned to engage a screw-head and provide compression of fractured bone fragments.
- 30 7. The bone plate of claim 1, wherein the second portion defines a concave recess in the upper surface of the bone plate.
8. The bone plate of claim 1, wherein:
 - the bone plate defines a first longitudinal axis;

a second axis extends between the first center point and the second center point; and

the first longitudinal axis and the second axis are substantially parallel.

5 9. The bone plate of claim 8, wherein the first longitudinal axis and the second axis overlap.

10 10. The bone plate of claim 8, wherein the second axis is spaced apart from the first longitudinal axis.

11 11. The bone plate of claim 1, further comprising at least two combination holes, wherein the bone plate defines a first longitudinal axis and the at least two combination holes are substantially aligned along the first longitudinal axis.

15 12. The bone plate of claim 11, wherein the first and second center points of the at least two combination holes are located on the first longitudinal axis.

13. The bone plate of claim 1, wherein the bone plate defines a first longitudinal axis, and the combination hole is spaced apart from the first longitudinal axis.

20 14. The bone plate of claim 13, wherein the first center point and the second center point are spaced apart from the first longitudinal axis.

25 15. The bone plate of claim 1, further comprising a first section having a first longitudinal axis, and a second section intersecting the first section and having a second longitudinal axis that is transverse to the first longitudinal axis.

16. The bone plate of claim 15, wherein the bone plate is substantially T-shaped or substantially L-shaped.

30 17. The bone plate of claim 15, wherein the first section is longer than the second section, and the at least one combination hole is located in the first section.

18. The bone plate of claim 15, wherein the first portion of the at least one combination hole is located closer to the intersection of the first section and the second section than is the second portion of the at least one combination hole.

5 19. The bone plate of claim 1, wherein the bone plate is anatomically contoured.

20. The bone plate of claim 1, wherein the bone plate is bent or twisted.

21. The bone plate of claim 1, wherein the lower surface is concave.

10 22. The bone plate of claim 1, further comprising a bone screw having a substantially spherical head for engaging the second portion.

15 23. The bone plate of claim 1, further comprising a bone screw having a threaded head for engaging the first portion.

24. The bone plate of claim 1, further comprising at least one non combination hole extending through the upper and lower surfaces, and configured to receive a bone fastener.

20 25. A bone plate comprising:
an upper surface;
a lower surface; and
at least one combination hole extending through the upper surface and the
25 lower surface, the at least one combination hole including:

a substantially circular portion having a plurality of threads disposed thereon, the substantially circular portion defining a first central axis; and

an elongated portion in communication with the substantially circular portion, the elongated portion defining a second central axis, wherein the first central axis is
30 spaced from the second central axis.

26. The bone plate of claim 25, wherein at least one of the first central axis and the second central axis is substantially perpendicular to the upper surface of the bone plate.

27. The bone plate of claim 25, wherein the elongated portion is substantially elliptical.

28. The bone plate of claim 25, wherein the plurality of threads extend over an angle of greater than about 180° with respect to the first central axis.

29. The bone plate of claim 25, wherein the plurality of threads taper radially inward in a direction from the upper surface toward the lower surface.

10 30. The bone plate of claim 25, wherein the elongated portion is configured and dimensioned to engage a screw-head and provide compression of fractured bone fragments.

31. The bone plate of claim 25, wherein the elongated portion defines a concave recess in the upper surface of the bone plate.

15 32. The bone plate of claim 25, further comprising at least two combination holes, wherein the bone plate defines a first longitudinal axis and the at least two combination holes are substantially aligned along the first longitudinal axis.

20 33. The bone plate of claim 32, wherein the first and second central axes of the at least two combination holes intersect the first longitudinal axis.

25 34. The bone plate of claim 25, further comprising a first section having a first longitudinal axis, and a second section intersecting the first section and having a second longitudinal axis that is transverse to the first longitudinal axis.

35. The bone plate of claim 34, wherein the bone plate is substantially T-shaped or substantially L-shaped.

30 36. The bone plate of claim 34, wherein the first section is longer than the second section, and the at least one combination hole is located in the first section.

35 37. The bone plate of claim 34, wherein the first portion of the at least one combination hole is located closer to the intersection of the first section and the second section than is the second portion of the at least one combination hole.

38. The bone plate of claim 25, wherein the bone plate is anatomically contoured.
- 5 39. The bone plate of claim 25, wherein the bone plate is bent or twisted.
40. The bone plate of claim 25, wherein the lower surface is concave.
41. The bone plate of claim 25, further comprising a bone screw having a substantially spherical head for engaging the second portion.
- 10 42. The bone plate of claim 25, further comprising a bone screw having a threaded head for engaging the first portion.
- 15 43. The bone plate of claim 25, further comprising at least one non combination hole extending through the upper and lower surfaces, and configured to receive a bone fastener.
44. A bone plate comprising:
20 an upper surface;
 a lower surface; and
 at least one combination hole extending through the upper surface and the lower surface, the at least one combination hole including:
 a first portion defining a substantially circular outer periphery and a plurality of threads extending substantially completely around the outer periphery; and
25 a second portion in communication with the first portion and defining an elongated outer periphery, wherein the first portion defines a concave recess in the upper surface of the bone plate.
- 30 45. The bone plate of claim 44, wherein the first portion defines a first center point and the second portion defines a second center point, and the first center point is located between the second center point and the elongated outer periphery.
46. The bone plate of claim 44, wherein the elongated outer periphery is substantially elliptical.

47. The bone plate of claim 44, wherein the first portion defines a first center point, and the plurality of threads extend over an angle of greater than about 180° with respect to the first center point.

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48. The bone plate of claim 44, wherein the plurality of threads taper radially inward in a direction from the upper surface toward the lower surface.

49. The bone plate of claim 44, wherein the second portion is configured and
10 dimensioned to engage a screw-head and provide compression of fractured bone fragments.

50. The bone plate of claim 44, wherein:
the bone plate defines a first longitudinal axis;
the first portion defines a first center point;
15 the second portion defines a second center point; and
a second axis extends between the first center point and the second center point;

wherein the first longitudinal axis and the second axis are substantially parallel.

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51. The bone plate of claim 50, wherein the first longitudinal axis overlaps the second axis.

52. The bone plate of claim 50, wherein the second axis is spaced apart from the
25 first longitudinal axis.

53. The bone plate of claim 44, further comprising at least two combination holes, wherein the bone plate defines a first longitudinal axis and the at least two combination holes are substantially aligned along the first longitudinal axis.

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54. The bone plate of claim 44, further comprising a first section having a first longitudinal axis, and a second section intersecting the first section and having a second longitudinal axis that is transverse to the first longitudinal axis.

55. The bone plate of claim 54, wherein the bone plate is substantially T-shaped or substantially L-shaped.

56. The bone plate of claim 54, wherein the first section is longer than the second section, and the at least one combination hole is located in the first section.

57. The bone plate of claim 54, wherein the first portion of the at least one combination hole is located closer to the intersection of the first section and the second section than is the second portion of the at least one combination hole.

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58. The bone plate of claim 54, wherein the bone plate is anatomically contoured.

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59. The bone plate of claim 54, wherein the bone plate is bent or twisted.

60. The bone plate of claim 54, wherein the lower surface is concave.

61. The bone plate of claim 54, further comprising a bone screw having a substantially spherical head for engaging the second portion.

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62. The bone plate of claim 54, further comprising a bone screw having a threaded head for engaging the first portion.

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63. The bone plate of claim 54, further comprising at least one non combination hole extending through the upper and lower surfaces, and configured to receive a bone fastener.